STAR EbyE Fluctuations

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Abstract

The large-acceptance STAR detector provides the possibility to characterize the fluctuations of a number of global event variables, and to relate these to large-scale two-particle correlations. We report here a study of $< p_t >$ fluctuations, related two-particle $m_t x m_t$ correlations and charge-multiplicity fluctuations. Substantial charge-dependent and charge-independent nonstatistical fluctuations are observed for the $< p_t >$ variable, with corresponding correlation structures in the $m_t x m_t$ system. Comparisons are made to theory and to NA49 results where available.

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